## REMARKS

Claims 1-20 were pending in this application.

Claims 1-20 have been rejected.

Claim 14 has been amended as shown above.

Claims 1-20 remain pending in this application.

Reconsideration and full allowance of Claims 1-20 are respectfully requested.

## I.     OBJECTION TO THE SPECIFICATION

The Office Action objects to the title of the application as not being descriptive. The Applicants have amended the title of the application. The Applicants respectfully submit that the amended title is descriptive of the "invention claimed" as required by M.P.E.P. § 606.01. The Applicants respectfully request withdrawal of the objection.

## II.     REJECTION UNDER 35 U.S.C. § 102

The Office Action rejects Claims 1-13 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,991,080 to Emma et al. ("*Emma*"). The Applicants respectfully traverse this rejection.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. (*MPEP § 2131; In re Bond, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990)*). Anticipation is only shown where each and every limitation of the claimed

invention is found in a single prior art reference. (*MPEP § 2131; In re Donohue, 766 F.2d 531, 534, 226 U.S.P.Q. 619, 621 (Fed. Cir. 1985)*).

The Office Action relies on elements 301 and 501 of *Emma* as anticipating the "branching cluster" recited in Claims 1 and 8. (*Office Action, Page 2, Paragraph 4a*). The Office Action relies on elements 201, 401, 601, and 701 of *Emma* as anticipating the "non-branching cluster" recited in Claims 1 and 8. (*Office Action, Page 2, Paragraph 4a*).

The Applicants respectfully note that Claims 1 and 8 distinguish between computation of a "branch address" and computation of a "branch condition." A data processor uses the "branch condition" to select a "branch address." (*Application, Page 21, Lines 1-3*). Claims 1 and 8 recite that a branching cluster and a non-branching cluster are "each capable of computing branch conditions" and that the branching cluster is capable of performing "branch address computations" for both of the clusters.

Based on these recitations in Claims 1 and 8, the Office Action must show that all of the cited elements of *Emma* (elements 201-701) are capable of "computing branch conditions" and that elements 301 and 501 of *Emma* are capable of performing "branch address computations" for all of the elements 201-701. The Office Action fails to make this showing.

The Office Action cites four portions of *Emma* as allegedly disclosing that all of the cited elements (elements 201-701) are capable of "computing branch conditions." The first portion of *Emma* recites how a "BA/TA stack" contains branch addresses used by two compare circuits. (*Col. 16, Lines 40-55*). The "BA" field represents the "location of the branch" within a "quadword," and the "TA" field represents the "target address" of the branch. (*Col. 10, Lines 65-*

*67*). The second cited portion of *Emma* recites how a target address may be retrieved from a branch history table (element 301) and provided to a prefetch control (element 201) and how entries in the table are forwarded to the "BA/TA stack." (*Col. 23, Lines 37-47*). The third cited portion of *Emma* recites how a predicted target address is compared to the actual target address to determine if a prediction was correct. (*Col. 22, Lines 39-59*). The fourth cited portion of *Emma* recites how the branch history table may need to be corrected. (*Col. 23, Lines 24-30*).

Nothing in the four cited portions of *Emma* describes how both a "branching cluster" and a "non-branching cluster" may compute "branch conditions" as recited in Claims 1 and 8. Instead, all of the cited portions refer to processing "branch addresses." In fact, the four cited portions of *Emma* contain absolutely no mention of computing any type of "branch conditions." As a result, the Office Action fails to establish that the cited elements 201-701 of *Emma* anticipate "branching" and "non-branching" clusters each capable of computing "branch conditions" as recited in Claims 1 and 8.

The Office Action also cites two portions of *Emma* as allegedly disclosing that elements 301 and 501 of *Emma* are capable of performing "branch address computations" for all of the cited elements 201-701. The first cited portion of *Emma* recites how the "BA/TA stack" contains branch addresses used by two compare circuits. (*Col. 16, Lines 40-55*). The second cited portion of *Emma* recites how a target address may be retrieved from the branch history table and provided to a prefetch control and how entries in the table are forwarded to the "BA/TA stack." (*Col. 23, Lines 37-47*).

Nothing in the two cited portions of *Emma* describes how a "branching cluster" is capable of performing "branch address computations" for both the branching cluster and a "non-branching cluster" as recited in Claims 1 and 8. Instead, the cited portions of *Emma* merely recite that branch addresses may be retrieved from a table. As a result, the Office Action fails to establish that the elements 301 and 501 of *Emma* anticipate a "branching cluster" capable of performing "branch address computations" for both "branching" and "non-branching" clusters as recited in Claims 1 and 8.

For these reasons, the Office Action fails to establish that *Emma* anticipates all elements of Claims 1 and 8. As a result, the Office Action fails to establish that *Emma* anticipates the Applicants' invention as recited in Claims 1 and 8 (and their dependent claims). Accordingly, the Applicants respectfully request withdrawal of the § 102 rejection and full allowance of Claims 1-13.


## III.   REJECTION UNDER 35 U.S.C. § 103

The Office Action rejects Claims 14-20 under 35 U.S.C. § 103(a) as being unpatentable over *Emma* in view of U.S. Patent No. 4,777,589 to Boettner et al. (*"Boettner"*). The Applicants respectfully traverse this rejection.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP § 2142; In re Fritch, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)*). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP*

*§ 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re*

*Piasecki, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)).* Only when a *prima*

*facie* case of obviousness is established does the burden shift to the applicant to produce

evidence of nonobviousness. (*MPEP § 2142; In re Oetiker, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d*

*1443, 1444 (Fed. Cir. 1992); In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956*

*(Fed. Cir. 1993)).* If the Patent Office does not produce a *prima facie* case of unpatentability,

then without more the applicant is entitled to grant of a patent. (*In re Oetiker, 977 F.2d 1443,*

*1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); In re Grabiak, 769 F.2d 729, 733, 226*

*U.S.P.Q. 870, 873 (Fed. Cir. 1985)).*

A *prima facie* case of obviousness is established when the teachings of the prior art itself

suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell, 991 F.2d*

*781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993)).* To establish a *prima facie* case of

obviousness, three basic criteria must be met. First, there must be some suggestion or

motivation, either in the references themselves or in the knowledge generally available to one of

ordinary skill in the art, to modify the reference or to combine reference teachings. Second,

there must be a reasonable expectation of success. Finally, the prior art reference (or references

when combined) must teach or suggest all the claim limitations. The teaching or suggestion to

make the claimed invention and the reasonable expectation of success must both be found in the

prior art, and not based on applicant's disclosure. (*MPEP § 2142*).

As described above in Section II, the Office Action fails to establish that *Emma*

anticipates a "branching cluster" and a "non-branching cluster" that are "capable of computing

branch conditions" and where the branching cluster is capable of performing "branch address computations" for both of the clusters. The Office Action cites *Boettner* only as allegedly reciting a "plurality of peripheral circuits." The Office Action does not rely on *Boettner* as disclosing, teaching, or suggesting a "branching cluster" and a "non-branching cluster" that operate as recited in Claim 14.

For these reasons, the Office Action fails to establish that the proposed *Emma-Boettner* combination discloses, teaches, or suggests all elements of Claim 14. As a result, the Office Action fails to establish a *prima facie* case of obviousness against Claim 14 (and its dependent claims). Accordingly, the Applicants respectfully request withdrawal of the § 103 rejection and full allowance of Claims 14-20.

## IV.  CONCLUSION

As a result of the foregoing, the Applicants assert that the claims in this application are in condition for allowance and respectfully request an early allowance of such claims.

## SUMMARY

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Applicants respectfully invite the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@davismunck.com*.
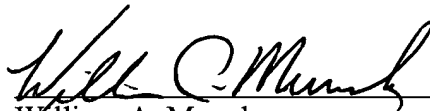
The Commissioner is hereby authorized to charge any additional fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

DAVIS MUNCK, P.C.

Date: _Jun 24, 2004_

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